**16**. The method of claim **14**, further comprising injecting a substance into the tissue before the delivering step, wherein the delivering step comprises transferring the substance into cells of the tissue within the electroporation field through reversible pores formed in cellular membranes of the cells responsive to the electroporation field.

**17**. The method of claim **16**, wherein the substance comprises nucleic acid that elicits an immune response in the subject.

**18**. The method of claim **14**, wherein the applying step comprises applying pulses of varying vacuum pressure to the tissue and varying the duration of the pulses.

**19**. The method of claim **14**, further comprising injecting a fluid into the tissue from an injection device that extends through a second port and into the chamber, wherein the injecting and applying steps are performed prior to the delivering step, and the injection device is one of an injection needle and a jet injection device.

**20**. A device for vacuum-assisted treatment of tissue, comprising:

a housing defining a chamber and at least one opening into the chamber;

a first port extending through the housing, wherein the first port is remote from the at least one opening and is connectable to a vacuum source, such that the first port is configured to communicate vacuum pressure from the vacuum source to the chamber; and

a jet-injection device that extends through a second port into the chamber, wherein the second port is opposite the at least one opening, wherein the jet-injection device is configured to deliver a jet injection of fluid to a targeted portion of tissue extending through the at least one opening and at least momentarily held in the chamber responsive to the vacuum pressure.

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